Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte MARTIN A. HEIT, JOHN J. WILKINS
and WILLIAM C. RAU

Appeal No. 95-2376
Application 07/989,494[1]

HEARD:
September 11, 1995

Before CALVERT, COHEN, and McQUADE, *Administrative Patent Judges.*

McQUADE, *Administrative Patent Judge.*

DECISION ON APPEAL

This appeal is from the final rejection of claims 53, 54, 58 through 61, 71, 81, 82 and 88 through 101. Claims 56, 57, 63 and

[1] Application for patent filed December 10, 1992, which is, according to appellants, a continuation of Serial No. 07/725,644, filed July 3, 1991, now abandoned.

83 through 87, the only other claims pending in the application, stand allowed.

The invention pertains to an endless drive belt which is adapted to be moved into and out of operative engagement with conveyor rollers. As described in the appellants' specification,

> the endless belt contemplates a series of roller chain links retained between spaced side plates; the side plates are configured to receive plastic drive pad segments that snap into receiving recesses. Each drive pad segment is parallelepiped in shape. The unique belt configuration permits the belt to pass about the sprocket wheels at the opposite longitudinal ends of the conveyor without jamming. The drive pads contact the underside of the rollers for driving same, without slippage [specification, page 7].

The specification also indicates that the parallelepiped shape of the drive pad segments "reduces the chatter usually associated with rectangular drive pads on padded chains and also insures that contact with the rollers ... can be maintained, at all times, when the rollers ... are driven by the drive chain" (specification, page 16).

Claims 88 and 101 are illustrative of the subject matter on appeal. Copies of these claims are appended hereto.

The references relied upon by the examiner as evidence of obviousness are:

Hibbard et al. (Hibbard)	2,954,113	Sep. 27, 1960
White et al. (White)	4,458,809	July 10, 1984

The appealed claims stand rejected as follows:

a) claims 88 through 100 under 35 USC 112, first paragraph, as being based on a specification which "as originally filed, does not provide support for the invention as is now claimed" (answer, page 3); and

b) claims 53, 54, 58 through 61, 71, 81, 82 and 101 under 35 USC 103 as being unpatentable over Hibbard in view of White.

The examiner's explanation of the 35 USC 112, first paragraph, rejection (see pages 2, 3, 5 and 6 in the answer) indicates that it is based on an alleged failure of the appellants' specification to comply with the written description requirement of this section of the statute with respect to the limitations recited in clause f of claim 88 and clause e of claim 95. These limitations define the pad portion of each of the recited drive pads as including

> a substantially rectangular body portion with substantially parallel edges and with right triangle end portions extending from each end of said body portion with the respective hypotenuse of said right triangle end portions parallel one to the other and with respective relatively short sides of said right triangles as extensions of said respective edges of said body portions but extending a distance relatively shorter than that of said respective edges.

The appellants contend that these limitations, while not finding literal support in the original specification, are merely descriptive of the parallelepiped pad portion configuration which is described and shown in the original specification and drawings (see pages 8 through 11 in the brief).

The test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter, rather than the presence or absence of literal support in the specification for the claim language. In re Kaslow, 707 F.2d 1366, 217 USPQ 1089 (Fed. Cir. 1983). The content of the drawings may also be considered in determining compliance with the written description requirement. Id.

The original disclosure in the instant application would not reasonably convey to the artisan that the appellants had possession at the time of filing of drive pads each having a pad portion including a substantially rectangular body portion and right triangle end portions as recited in claims 88 and 95. The parallelepiped pad portions described and shown in the original specification and drawings are simply not disclosed as including such "portions." While a parallelepiped shape certainly can be described in terms of rectangular and right triangular areas delimited by imaginary lines as illustrated on page 9 in the brief, this is not what is recited by the claim limitations in

question. These limitations are instead directed to structural "portions" which have no support in the original disclosure.[2]

We shall therefore sustain the standing 35 USC 112, first paragraph, rejection of claims 88 and 95 and of claims 89 through 94 and 96 through 100 which depend therefrom.

We shall not sustain, however, the standing 35 USC 103 rejection of claims 53, 54, 58 through 61, 71, 81, 82 and 101 as being unpatentable over Hibbard in view of White.

Hibbard discloses an articulated chain-type conveyor consisting of a plurality of alternately arranged roller and pin links which are interconnected to form an endless chain. The interconnected links support a plurality of flat-topped flight attachments which together provide a substantially continuous support surface for the articles or material being conveyed. In the embodiment relied upon by the examiner (see Figures 10 through 12), the endless chain 55 is composed of alternately arranged roller links 56 and pin links 57. The flight attachments are of two types, one type 62 adapted to be mounted to the side plates 58 of the roller links and the other type 63 adapted to be mounted to the side plates 59 of the pin links. Flight attachments 62 include flexible, downwardly projecting

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[2] It is also highly questionable whether the recitation in claim 96 relating the length of the short sides of the triangular end portions to the spacing between the center lines of the rollers of the roller chain links has the requisite support in the original disclosure.

legs 64 having inwardly directed lugs 65, while flight attachments 63 include flexible, downwardly projecting legs 66 having outwardly directed lugs 65. These legs are adapted to be positioned adjacent the side plates of the associated link as shown in Figures 11 and 12 with the lugs thereon being snapped into respective holes in the side plates.

Independent claim 101 recites a drive chain arrangement comprising, inter alia, a chain assembly including pairs of connecting plates and chain links alternating in disposition, and a plurality of drive pads carried by the chain assembly in single file alignment so as to position first and second ends of the drive pads proximate respective first and second ends of others of the drive pads. Each of the drive pads is also required to be

> carried by a respective one of said pairs of connecting plates with said first ends of said pads extending over at least a portion of the chain link to which said first ends of said pair of connecting plates are connected to and with said second ends of said pads extending over at least a portion of the chain link to which said second ends of said pair of connecting plates are connected to.

The examiner's position (see page 4 in the answer) appears to be that Hibbard's roller links correspond to the claimed chain links, that the side plates of Hibbard's pin links correspond to the recited connecting plates and that Hibbard's flight attachments 63 correspond to the claimed drive pads. Although the examiner concedes that Hibbard's flight attachments 63 do not

have first and second ends which extend over at least portions of the adjacent chain links as is required of the recited drive pads, this is not entirely accurate. Figure 10 shows that Hibbard's flight attachments 63 do in fact have first and second ends which extend over at least portions of the adjacent chain or roller links. As noted above, however, claim 101 requires the first and second ends of the drive pads to be proximate respective first and second ends of others of the drive pads. The first and second ends of the flight attachments 63 cannot be said to be proximate respective first and second ends of others of these flight attachments due to the interposition of flight attachments 62. Thus, it may be more precisely stated that Hibbard's flight attachments 63 do not have first and second ends which extend over at least portions of the adjacent chain links and are proximate respective first and second ends of others of the flight attachments 63 as is required of the drive pads recited in claim 101. The examiner's reliance on the White patent to cure this deficiency in the Hibbard reference vis-a-vis the claimed subject matter is not well founded.

White discloses a conveyor roller drive consisting of links 20 and 20a pivotally joined together by pins 21 surrounded by roller sleeves 22. The interconnected links support a plurality of flat-topped pads 30 which are adapted to drivingly contact the undersides of a series of conveyor rollers. Each pad has a

downwardly extending stem 40 which snaps into engagement between adjacent roller sleeves 22. The flat tops of the pads have a parallelogram shape which extends lengthwise of the chain sufficiently to overlap the link to which the pad is attached and most if not all of the two adjacent links. This construction provides a gradual transition from one pad to the next which reduces noise as the pads traverse the rollers and eliminates interruption of the motion transmitted to these rollers by the pads (see column 1, lines 53 through 64).

According to the examiner, it would have been obvious to one of ordinary skill in the art to modify the flight attachments disclosed by Hibbard by providing them with the sort of overlapping tops disclosed by White "as it would increase pad surface area while eliminating the gap between pads" (answer, page 4). Presumably, this modification would result in the drive chain arrangement recited in claim 101.

The combined teachings of Hibbard and White, however, do not support the examiner's conclusion of obviousness. The tops of White's pads 30 are shaped and constructed as they are in order to solve noise and motion transmission problems specific to the intended use of the White mechanism to drivingly contact the undersides of conveyor rollers. The Hibbard flight attachments are not intended to perform such a function. As noted above, the top surfaces of these flight attachments define a support surface

for the articles or material being conveyed. Thus, it is not apparent why the artisan would have been motivated to modify Hibbard's flight attachments in view of White in the manner proposed by the examiner.

Indeed, the examiner's rationale that the proposed modification would have been prompted by a resulting increase in pad surface area and elimination of the gap between the pads betrays the unsound basis of the Hibbard-White combination. For one thing, neither reference discusses these features or otherwise indicates that they would be desirable. Moreover, increasing the surface area of Hibbard's flight attachments or pads and eliminating the gaps therebetween could be achieved in any number of ways different from the one embodied by the examiner's proposed combination of Hibbard and White. Simply put, the only suggestion for making such a combination stems from hindsight knowledge impermissibly derived from the appellants' own disclosure. Thus, the examiner's conclusion that the subject matter recited in claim 101, and in claims 53, 54, 58 through 61, 71, 81 and 82 which depend therefrom, would have been obvious within the meaning of 35 USC 103 in view of the combined teachings of Hibbard and White is not well founded.

In summary, the decision of the examiner:

a) to reject claims 88 through 100 under 35 USC 112, first paragraph, is affirmed; and

b) to reject claims 53, 54, 58 through 61, 71, 81, 82 and 101 under 35 USC 103 as being unpatentable over Hibbard in view of White is reversed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. §1.136(a).

AFFIRMED-IN-PART

IAN A. CALVERT
Administrative Patent Judge)

IRWIN CHARLES COHEN
Administrative Patent Judge) BOARD OF PATENT APPEALS AND INTERFERENCES

JOHN P McQUADE
Administrative Patent Judge)

Appeal No. 95-2376
Application 07/989,494

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APPENDIX

--88. A drive chain arrangement; comprising:

a) a chain assembly including a plurality of chain links having at least first and second ends and a plurality of pairs of connecting plates;

b) each plate of said plurality of pairs of connecting plates having first and second surfaces terminating in first and second ends and including at least a first edge surface extending between said first and second ends of each plate;

c) said pairs of connecting plates and said chain links alternating in disposition and being articulatably connected together proximate respective ends thereof to form a predetermined length of articulatable chain;

d) a plurality of drive pads carried by said chain assembly in single file alignment along the length of said chain assembly so as to position drive surfaces of a pad portion of each of said drive pads in a common plane and so as to position first and second ends of said drive pads proximate respective first and second ends of others of said drive pads when so carried by said chain assembly;

e) each of said drive pads being carried by a respective one of said pairs of connecting plates with said first ends of said pads extending over at least a portion of the chain link to which said first ends of said pair of

connecting plates are connected to and with said second ends of said pads extending over at least a portion of the chain link to which said second ends of said pair of connecting plates are connected to;

f) said pad portion, of each of said drive pads, including a substantially rectangular body portion with substantially parallel edges and with right triangle end portions extending from each end of said body portion with the respective hypotenuse of said right triangle end portions parallel one to the other and with respective relatively short sides of said right triangles as extensions of said respective edges of said body portions but extending a distance relatively shorter than that of said respective edges.--

--101. A drive chain arrangement; comprising:

a) a chain assembly including a plurality of chain links having at least first and second ends and a plurality of pairs of connecting plates;

b) each plate of said plurality of pairs of connecting plates having first and second surfaces terminating in first and second ends and including at least a first edge surface extending between said first and second ends of each plate;

c) said pairs of connecting plates and said chain links alternating in disposition and being articulatably connected together proximate respective ends thereof to form a predetermined length of articulatable chain; and

d) a plurality of drive pads carried by said chain assembly in single file alignment along the length of said chain assembly so as to position drive surfaces of a pad portion of each of said drive pads in a common plane and so as to position first and second ends of said drive pads proximate respective first and second ends of others of said drive pads when so carried by said chain assembly;

e) each of said drive pads being carried by a respective one of said pairs of connecting plates with said first ends of said pads extending over at least a portion of the chain link to which said first ends of said pair of connecting plates are connected to and with said second ends of said pads extending over at least a portion of the chain link to which said second ends of said pair of connecting plates are connected to;

f) each of said drive pads having a side to side width for at least a predetermined portion thereof that extends substantially over, but not substantially beyond, said respective edge surfaces of said pairs of connecting plates.--